UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/563,629	02/13/2006	Seth Erdner	29827/41769	1964

4743 7590 03/17/2009

MARSHALL, GERSTEIN & BORUN LLP
233 SOUTH WACKER DRIVE
6300 SEARS TOWER
CHICAGO, IL 60606-6357

EXAMINER	
GRESO, AARON J	
ART UNIT	PAPER NUMBER
1796	

MAIL DATE	DELIVERY MODE
03/17/2009	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/563,629	ERDNER ET AL.	
	Examiner	Art Unit	
	AARON GRESO	1796	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-15* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-15* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *05/19/2006*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 3, 6-7, 9, 11, 13-15 are rejected under 35 U.S.C. 102(b) as being anticipated by *Katzer (US 3354084)*.

Katzer discloses a method for applying forest fire fighting compositions (col 5 lines 3-8) comprising minerals and pigments *(col 4 Table 1)* and further comprising water-swellable acrylic polymers *(col 1 lines 41-49)* and water with the amount polymer solids being from 0.05 to 2.0 weight percent *(col 1 lines 50-53)*.

The compositions can additionally comprise from 0.01 to 0.3 percent water soluble dyes [taken as a colorant] and other polymers such as acrylates and solid particle copolymers comprising vinyl-pyrrolidones and styrenic monomers *(col 4 lines 34-53)*, among others, that can be included from 0 up to 40 percent; these can inherently serve as opacifiers. Finely divided opaque, non-ionic materials also present include silicate and carbonate metals of calcium and lead *(col 2 lines 1-12)* having a presence of 0.1 to 2 parts ($1/10^{th}$ to twice the amount) of the swellable polymer present. The reference's Example 1 *(col 3 lines 26-47)* shows a method, comprising material

addition steps, to make formulation dispersions. The solid particles, which are also inherently are opacifiers, are disclosed to also function as viscosity modifiers *(col 2 lines 22-32)*.

The dyes present in the formulations make them more visible *(col 1, line 64)*; this inherently makes them more visible when applied to an area or object that will be considered or is considered fire involved. Such a dye can be a Rhodamine dye *(Example 1, col 3 line 44)*.

The reference's disclosures encompass the Applicant's Claims. Therefore, Claims 1, 3, 6-7, 11, 13-15 are rejected.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

The Supreme Court in KSR International Co. v. Teleflex Inc. identified a number of rationales to support a conclusion of obviousness which are consistent with the proper “functional approach” to the determination of obviousness as laid down in Graham. The key to supporting any rejection under 35 U.S.C. 103 is the clear articulation of the reason(s) why the claimed invention would have been obvious.

The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Exemplary rationales that may support a conclusion of obviousness include:

(A) Combining prior art elements according to known methods to yield predictable results;
(B) Simple substitution of one known element for another to obtain predictable results;
(C) Use of known technique to improve similar devices (methods, or products) in the same way;
(D) Applying a known technique to a known device (method, or product) ready for improvement to yield predictable results;
(E) "Obvious to try" – choosing from a finite number of identified, predictable solutions, with a reasonable expectation of success;

Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over *Katzer (US 3354084)* as applied to Claim 1 above.

Katzer (US 3354084) does not specifically name calcium carbonate for use as an opacifier.

On the other hand, *Katzer (col 1 line 43-44 and col 2 lines 1-2)* indicates that calcium silicate and lead carbonate can be employed for such non ionic, non-water soluble opaque applications but that they are only illustratively named. The reference therefore teaches that any non-water soluble material, with properties similar to those of calcium silicate or lead carbonate, would suffice as opacifying agents, including the

Applicants' Calcium Carbonate, when calcium and carbonate materials are suggested by the reference.

It would have been obvious to one skilled in the art, at the time of the invention, to have substituted a similar material for the same application, in a successful product ready for improvement from a finite number of ingredients that are encompassed by the teachings of *Katzer*. Therefore, Claim 2 is rejected.

Claims 4-6, 12-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over *Katzer (US 3354084)* as applied to Claims 1, 11 above, in view of *Tanaka et al. (US Ap 2002/0014610)*.

As to Claim 4:

Katzer does not specifically include application of polyethylenimine as a polymer in the fire abatement composition.

On the other hand, *Tanaka et al. (page 1 paragraph [0002])* includes polyethyleneimines, or their derivatives *(page 2 paragraph [0023-0028])*, among others, in fire extinguishing compositions.

It would have been obvious at the time of the invention for one of ordinary skill in the art to have applied the teachings of *Katzer*, involving use of polymers to fight fires, towards substituting known fire abatement polymer materials that include polyethyleneimines needed to use them as presented in the compositions by *Tanaka et*

al. and to use these successful compositions, ready for improvement, for the same purpose of fighting fires. Therefore, Claim 4 is rejected.

As to Claim 6, 13:

Katzer does not specifically include application pH modifier in compositions.

On the other hand, *Tanaka et al. (page 19 paragraph [0137])* includes a pH modifier in the compositions.

It would have been obvious at the time of the invention for one of ordinary skill in the art to have applied the teachings of *Katzer*, involving use of polymers to fight fires, towards substituting known fire abatement polymer materials with the pH adjustment needed to use them as presented in the compositions by *Tanaka et al.* and to use these successful compositions, ready for improvement, for the same purpose of fighting fires. Therefore, Claims 6 and 13 are rejected.

As to Claims 5 and 12:

Katzer does not specifically include application of water soluble organic solvents the polymeric fire abatement compositions.

On the other hand, *Tanaka et al. (page 1 paragraph [0002])* includes water soluble organic solvents in fire extinguishing and flame resistance compositions containing polymers. The initial concentrated solutions *(page 19 paragraphs [0131]-[0137])*, comprising 30% water soluble organic solvents *(butyl carbitol {15%} and ethylene glycol {15%})*, are diluted by a factor of 33.3 with water *(page 20 paragraph*

[0140]) to make the compositions prior to testing. This provides fire suppression compositions that contain, roughly, about 30%/33.3 or about 0.9 percent water soluble solvents.

It would have been obvious at the time of the invention for one of ordinary skill in the art to have applied the teachings of *Katzer*, involving use of superabsorbent polymers to fight fires, towards substituting known fire abatement polymer materials with the solvents to compositions by *Tanaka et al.* and to use these successful compositions, ready for improvement, for the same purpose of fighting fires. Therefore, Claims 5 and 12 are rejected.

Claims 8-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over *Katzer (US 3354084)* as applied to Claims 1, 11 above, in view of *Vandersall (US Ap 2002/0013403).*

Katzer does not specifically accentuate application of visually detectable or distinguishable dyes that fade substantially within 30 days of deployment.

On the other hand, *Vandersall (page 2 paragraphs [0019]-[0021] and page 12 paragraph [0142])* teach of using dyed fire fighting compositions that are used to mark locations using aircraft and ground vehicles. These compositions fade within 6000 Langleys {where 12,000 Langleys is 32 days of sunlight exposure; *(page 23 paragraph [0201])*}.

It would have been obvious at the time of the invention for one of ordinary skill in the art to have applied the teachings of *Katzer*, involving use of superabsorbent

polymers to fight fires, towards substituting known dye materials for the same applications using the of dyes *Vandersall* that is applied from vehicles. Therefore, Claims 8-10 are rejected.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to AARON GRESO whose telephone number is (571)270-7337. The examiner can normally be reached on M-F 0730-1700.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Sample can be reached on (571) 272-1376. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/James J. Seidleck/
Supervisory Patent Examiner, Art Unit

AJG